

Meeting of the Central Valley Flood Protection Board  
July 18, 2008

Central Valley Flood Protection Board Staff Report  
PL 84-99 Levee Rehabilitation Project –  
Lower San Joaquin Levee District

---

**Board Action**

Consider adoption of Resolution 08-15 in which the Central Valley Flood Protection Board, acting in its capacity as CEQA lead agency, adopts the Mitigated Negative Declarations, Findings, and Mitigation Measures for PL 84-99 Levee Rehabilitation Projects in Lower San Joaquin Levee District.

Consider adoption of the Project Cooperative Agreement between the U.S. Army Corps of Engineers (Corps) and the Central Valley Flood Protection Board (Group C) conditional on the receipt of necessary signed local assurance agreements from the maintaining agencies, and delegate approval to the Executive Officer.

**Location**

The project is part of the Lower San Joaquin Levee District and is located in southern Madera County near the towns of Mendota, Firebaugh, and Dos Palos. Project sites are located on Chowchilla Bypass downstream of the confluence with the San Joaquin River. Three Chowchilla Bypass sites on the right bank are between levee mile 11.8 and 12.8. Left bank sites are located between levee mile 11.7 and levee mile 14.1.

**Description**

The Central Valley Flood Protection Board of the State of California, the lead agency under the California Environmental Quality Act and the nonfederal sponsor, cooperated with the U.S. Army Corps of Engineers, the federal sponsor, to prepare a joint Environmental Assessment/Initial Study for the federal Public Law 84-99 Rehabilitation Assistance Program for damage to levees in Lower San Joaquin Levee District, located in Madera County. The district levees were damaged in floods that occurred in 2005 and 2006. Federal funds were not made available until late spring of 2007. Planning efforts, limited construction windows due to endangered species requirements and land-and right-of-way issues have pushed construction into 2008.

Construction will be a cost share between the Corps and DWR. The Corps will fund the site work eligible under PL84-99 and DWR will fund the portion of the work that is betterment. The Corps is the Lead Agency and considered as responsible for contracting and construction.

Construction will begin in August of 2008 and take approximately 5 months. The project will impact approximately 180 linear feet of the landside levee slope on the right bank and 15,471 linear feet of levee crown on the left bank.

To repair and rehabilitate the levees in right bank of the Chowchilla Bypass a landside levee berm will be installed. The left bank repair is a continuous slurry wall from levee mile 11.7 to 14.1 along the center line of the levee crown.

The landside berms will be constructed by removing the existing emergency gravel, placing drain rock, geotextile fabric and a layer of seeded topsoil. The slurry wall construction will remove the top two feet of levee crown, excavate an approximately 25 foot deep trench along the levee crown center line, and back fill the trench with a cement/bentonite slurry. The levee crown will be rebuilt to original design elevations with an impervious levee crown topped with gravel on the road bed. Upon completion, all disturbed ground will be reseeded with native grasses.

### **Background**

The Board is the local sponsor for the federal Public Law 84-99 Rehabilitation Assistance Program that is administered by the Corps of Engineers (Corps). Following damage from high water events during December and January of 2006 and again in April of 2006, impacting federally-authorized flood control projects in the Sacramento and San Joaquin flood control basins, a federal disaster declaration made Madera County eligible for the PL 84-99 levee rehabilitation program. The Corps Sacramento District issued a public notice for rehabilitation assistance dated February 2, 2006. The Board, as the public sponsor for the PL 84-99 program, forwarded the request for PL 84-99 assistance from Lower San Joaquin Levee District to the Corps for evaluation of eligibility of submitted levee damage report in a letter dated July 20, 2006.

LSJLD originally requested assistance for twenty five erosion sites. Three sites were repaired as order 2 sites. Four sites were temporarily repaired and will be monitored. Eleven sites will be repaired with this project. The remaining 7 sites are pending repairs contingent upon resolution of land and right of way issues are resolved. Total project cost for this project is approximately \$14,000,000.

The Board will enter into a Cooperation Agreement with the Corps prior to the initiation of construction at the sites listed in the attachment to the Agreement. Pursuant to this Agreement the Board will:

a. Provide all lands, easements, and rights-of-way, including suitable borrow and excavated material disposal areas, and perform all relocations determined by the Government to be necessary for construction, operation and maintenance of the project.

b. Hold and save the Government free from all damages arising from the construction, operation, and maintenance of the project and any project-related betterments, except for damages due to the fault or negligence of the Government or the Government contractors.

Land use in the area is primarily agricultural. However, homes and industries are also protected by levees in this district.

### **Staff Recommendation**

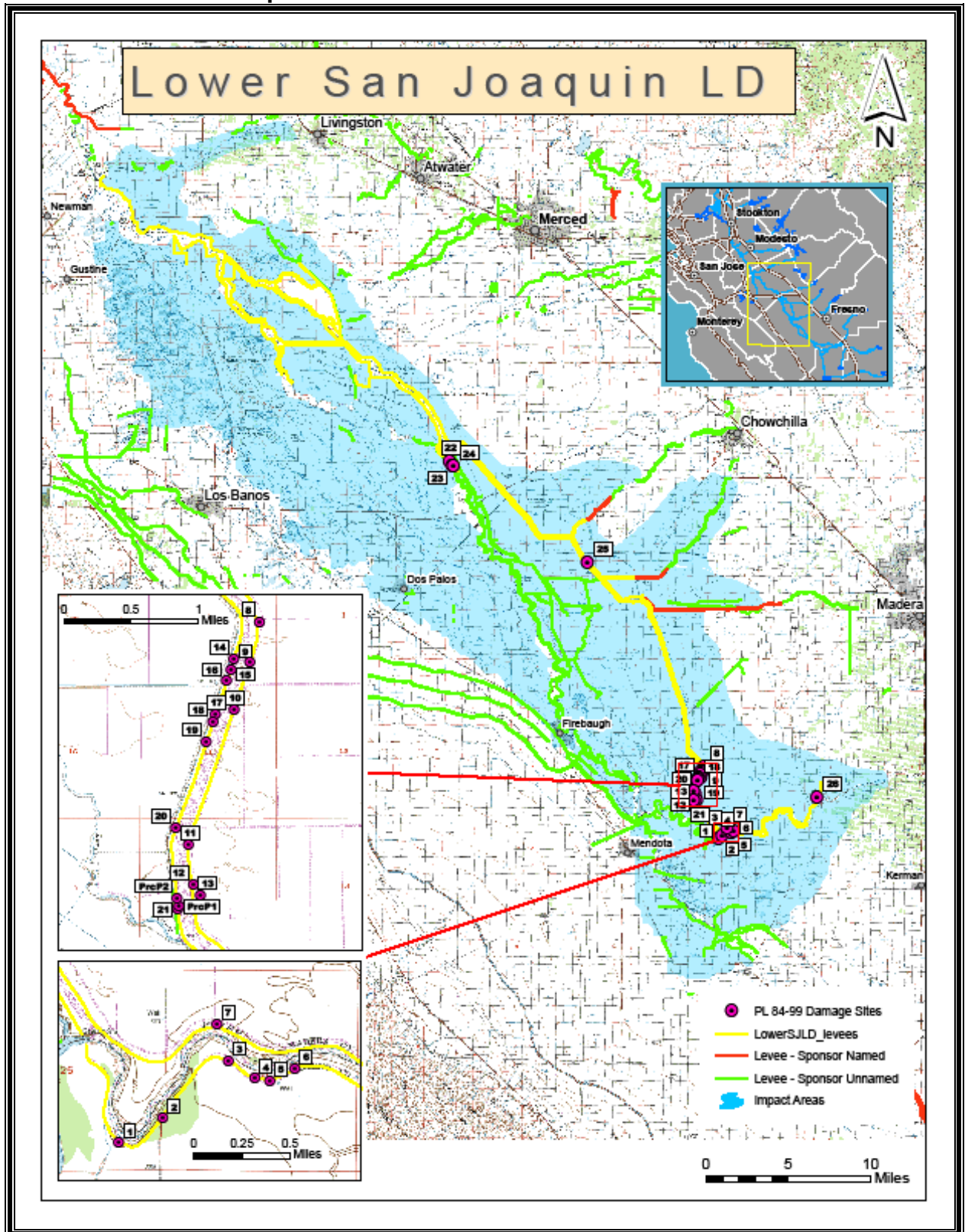
Staff recommends that the CEQA documents be approved and adopted and that the Board approve the project and delegate to the Executive Officer the authority to execute the Project Cooperative Agreement with the U.S. Army Corps of Engineers, but only upon receipt of necessary signed local assurance agreements from the maintaining agencies. The Executive Officer is also delegated the authority to acquire property interests to complete the Project.

### **Attachments**

Exhibit A – Location Map LSJLD

Exhibit B – EA/IS FONSI MND

Exhibit A. Location Map LSJLD



State of California  
The Resource Agency  
Central Valley Flood Protection Board Staff Report  
Resolution No. 08-13

PL 84-99 Levee Rehabilitation Project,  
Lower San Joaquin Levee District

WHEREAS, between 28 December 2005 and 9 January 2006, and again in April 2006, the State of California experienced a series of severe storms with many rivers running above flood stage that damaged levees within the Corps' Sacramento District's boundaries in the Sacramento and San Joaquin River Basins, and resulted in significant erosion and seepage problems along many of these levees; and

WHEREAS, high flow in Chowchilla Bypass in December 2005 and January 2006 caused through seepage and boils and destabilized sections of the levees within Lower San Joaquin Levee District (LSJLD), causing extensive damage and necessitating emergency seepage blanket placement in 2006; and

WHEREAS, under the authority of the federal Public Law (PL) 84-99 the U.S. Army Corps of Engineers (Corps), the State and the local maintaining agencies are working cooperating to restore the flood-damaged levee systems to pre-storm conditions; and

WHEREAS, the Central Valley Flood Protection Board (Board) has agreed to serve as the nonfederal sponsor of the Public Law (PL) 84-99 Rehabilitation and Inspection Program in the Cooperative Agreement between the United States of America and the Central Valley Flood Protection Board for Rehabilitation of a Federal Flood Control Work; and

WHEREAS, the Central Valley Flood Protection Board of the State of California, the lead agency under the California Environmental Quality Act and the nonfederal sponsor, is cooperating with the U.S. Army Corps of Engineers, the federal sponsor, to prepare a joint Environmental Assessment/Initial Study (EA/IS) and Mitigated Negative Declaration (MND) for the federal Public Law 84-99 Rehabilitation Assistance Program for damage to levees in Lower San Joaquin Levee District (Project); and

WHEREAS, the joint EA/IS and draft MND were filed with the State Clearinghouse June 10, 2008, and the Public review period required by the California Environmental Quality Act ended on July 11, 2008, and all comments received have been addressed; and

WHEREAS, the effects of the proposed Project on vegetation, wildlife and other environmental features are described and appropriate mitigation is recommended within the EA/IS.

NOW, THEREFORE, BE IT RESOLVED that the Central Valley Flood Protection Board acting in its capacity as CEQA lead agency:

1. Adopt Mitigated Negative Declaration, Findings and Mitigation Measures for the PL 84-99 Levee Rehabilitation Project in Lower San Joaquin Levee District; and
2. Approve the project; and
3. Delegate to the Executive Officer the authority to execute the Project Cooperative Agreement with the U.S. Army Corps of Engineers, but only upon receipt of necessary signed local assurance agreements from the maintaining agencies. The Executive Officer is also delegated the authority to acquire property interests to complete the Project.

Dated:\_\_\_\_\_

By \_\_\_\_\_  
Benjamin F. Carter  
President

By \_\_\_\_\_  
Maureen Doherty  
Secretary

Approved as to Legal form  
And Sufficiency

\_\_\_\_\_  
Nancy Finch  
Senior Staff Counsel

# Notice of Completion & Environmental Document Transmittal

2008061057

Mail to: State Clearinghouse, P. O. Box 3044, Sacramento, CA 95812-3044 (916) 445-0613

For Hand Delivery/Street Address: 1400 Tenth Street, Sacramento, CA 95814

SCH #

**Project Title:** LSJLD Chowchilla Bypass PL84-99 Levee Repairs

Lead Agency: Central Valley Flood Protection Board

Contact Person: Lorraine Pendlebury

Mailing Address: 3310 El Camino Avenue, Room LL 40

Phone: (916) 574-0609

City: Sacramento

Zip: 95821

County: Sacramento

**Project Location:** County: Madera

City/Nearest Community: Madera

Cross Streets: See Attached Map

Zip Code:

Lat. / Long.: 36 ° 49 ' 25.3 " N 120 ° 18 ' 6 " W

Total Acres: approx 10

Assessor's Parcel No.: See Attached

Section: 1

Twp.: 13S

Range: 15E

Base: Mt Diablo

Within 2 Miles: State Hwy #: N/A

Waterways: Chowchilla Bypass

Airports: N/A

Railways: N/A

Schools: N/A

## Document Type:

CEQA:

☐ NOP

☐ Early Cons

☐ Neg Dec

☒ Mit Neg Dec

☐ Draft EIR

☐ Supplement/Subsequent EIR

(Prior SCH No.)

Other Initial Study

NEPA:

☐ NOI

☒ EA

☐ Draft EIS

☒ FONSI

Other:

☐ Joint Document

☐ Final Document

☐ Other

## Local Action Type:

☐ General Plan Update

☐ General Plan Amendment

☐ General Plan Element

☐ Community Plan

☐ Specific Plan

☐ Master Plan

☐ Planned Unit Development

☐ Site Plan

☐ Rezone

☐ Prezone

☐ Use Permit

☐ Land Division (Subdivision, etc.)

☐ Annexation

☐ Redevelopment

☐ Coastal Permit

☒ Other levee repair

## Development Type:

☐ Residential: Units

Acres

☐ Office: Sq.ft.

Acres

☐ Commercial: Sq.ft.

Acres

☐ Industrial: Sq.ft.

Acres

☐ Educational

☐ Recreational

RECEIVED

JUN 10 2008

STATE CLEARING HOUSE

Water Facilities: Type

MGD

☐ Transportation: Type

☐ Mining: Mineral

☐ Power: Type

MW

☐ Waste Treatment: Type

MGD

☐ Hazardous Waste: Type

☒ Other: Levee Repair 16020 linear feet,

## Project Issues Discussed in Document:

☒ Aesthetic/Visual

☐ Agricultural Land

☒ Air Quality

☒ Archeological/Historical

☒ Biological Resources

☐ Coastal Zone

☐ Drainage/Absorption

☐ Economic/Jobs

☐ Fiscal

☐ Flood Plain/Flooding

☐ Forest Land/Fire Hazard

☒ Geologic/Seismic

☐ Minerals

☒ Noise

☐ Population/Housing Balance

☐ Public Services/Facilities

☒ Recreation/Parks

☐ Schools/Universities

☐ Septic Systems

☐ Sewer Capacity

☐ Soil Erosion/Compaction/Grading

☐ Solid Waste

☒ Toxic/Hazardous

☒ Traffic/Circulation

☒ Vegetation

☒ Water Quality

☐ Water Supply/Groundwater

☐ Wetland/Riparian

☐ Wildlife

☐ Growth Inducing

☒ Land Use

☒ Cumulative Effects

☒ Other Environmental Justice, Green house gasses

## Present Land Use/Zoning/General Plan Designation:

Agricultural, Madera County

## Project Description: (please use a separate page if necessary)

See attached sheet

Note: The state Clearinghouse will assign identification numbers for all new projects. If a SCH number already exists for a project (e.g. Notice of Preparation or previous draft document) please fill in.

January 2008



## Reviewing Agencies Checklist

Lead Agencies may recommend State Clearinghouse distribution by marking agencies below with and "X".  
If you have already sent your document to the agency please denote that with an "S".

<input checked="" type="checkbox"/> Air Resources Board	<input type="checkbox"/> Office of Historic Preservation
<input checked="" type="checkbox"/> Boating & Waterways, Department of	<input checked="" type="checkbox"/> Office of Public School Construction
<input checked="" type="checkbox"/> California Highway Patrol	<input type="checkbox"/> Parks & Recreation
<input checked="" type="checkbox"/> Caltrans District # <u>6</u>	<input type="checkbox"/> Pesticide Regulation, Department of
<input type="checkbox"/> Caltrans Division of Aeronautics	<input type="checkbox"/> Public Utilities Commission
<input checked="" type="checkbox"/> Caltrans Planning (Headquarters)	<input type="checkbox"/> Reclamation Board
<input type="checkbox"/> Coachella Valley Mountains Conservancy	<input checked="" type="checkbox"/> Regional WQCB # <u>5F</u>
<input type="checkbox"/> Coastal Commission	<input type="checkbox"/> Resources Agency
<input type="checkbox"/> Colorado River Board	<input type="checkbox"/> S.F. Bay Conservation & Development Commission
<input checked="" type="checkbox"/> Conservation, Department of	<input type="checkbox"/> San Gabriel & Lower L.A. Rivers and Mtns Conservancy
<input type="checkbox"/> Corrections, Department of	<input type="checkbox"/> San Joaquin River Conservancy
<input checked="" type="checkbox"/> Delta Protection Commission	<input type="checkbox"/> Santa Monica Mountains Conservancy
<input type="checkbox"/> Education, Department of	<input checked="" type="checkbox"/> State Lands Commission
<input type="checkbox"/> Energy Commission	<input type="checkbox"/> SWRCB: Clean Water Grants
<input checked="" type="checkbox"/> Fish & Game Region # <u>4</u>	<input type="checkbox"/> SWRCB: Water Quality
<input type="checkbox"/> Food & Agriculture, Department of	<input type="checkbox"/> SWRCB: Water Rights
<input type="checkbox"/> Forestry & Fire Protection	<input type="checkbox"/> Tahoe Regional Planning Agency
<input type="checkbox"/> General Services, Department of	<input type="checkbox"/> Toxic Substances Control, Department of
<input type="checkbox"/> Health Services, Department of	<input type="checkbox"/> Water Resources, Department of
<input type="checkbox"/> Housing & Community Development	
<input type="checkbox"/> Integrated Waste Management Board	<input type="checkbox"/> Other _____
<input checked="" type="checkbox"/> Native American Heritage Commission	<input type="checkbox"/> Other _____
<input type="checkbox"/> Office of Emergency Services	

### Local Public Review Period (to be filled in by lead agency)

Starting Date June 10, 2008 Ending Date July 11, 2008

### Lead Agency (Complete if applicable):

Consulting Firm: _____	Applicant: _____
Address: _____	Address: _____
City/State/Zip: _____	City/State/Zip: _____
Contact: _____	Phone: _____
Phone: _____	

Signature of Lead Agency Representative: \_\_\_\_\_ Date: \_\_\_\_\_

Authority cited: Section 21083, Public Resources Code. Reference: Section 21161, Public Resources Code.



## NOTICE OF COMPLETION CONTINUATION SHEET

### PROJECT DESCRIPTION:

The Board in partnership with the U.S. Army Corps of Engineers (Corps), the federal sponsor, has jointly prepared an Environmental Assessment/Initial Study for this proposed rehabilitation project under the Corps' Public Law 84-99 Rehabilitation Assistance for damaged levees. The Corps and Board propose to repair 10 sites on Chowchilla Bypass on the left and right levees damaged by through seepage and sand boils. The levees will be restored to the pre-flood condition. The right bank repairs will consist of three landside seepage berms totaling approximately 180 feet. The left bank repair will consist of a continuous slurry wall constructed along the center line of the levee for a total of approximately 15,840 feet. The Corps, with DWR cost share, will fund and contract for the work. The levees protect a 700-square mile area, which includes agriculture fields and the towns of Mendota, Firebaugh, and Dos Palos.

The landside berms will be constructed by removing the existing emergency gravel, placing drain rock, geotextile fabric and a layer of seeded topsoil. The slurry wall construction will remove the top two feet of levee crown, dig an approximately 18 foot deep trench along the levee crown center line, and back fill the trench with a bentonite/soil slurry. The levee crown will be rebuilt with an impervious layer topped with gravel on the road bed. Upon completion, all disturbed ground will be reseeded with native grasses. Construction will begin in August 2008 and take approximately 5 months.

The Board and the USACE directed the preparation of the initial study/mitigated negative declaration (IS/MND) on this proposed project in accordance with requirements of the California Environmental Quality Act (CEQA). The document describes the proposed project and potential environmental impacts, and concludes that any significant effects that may result from the proposed project can be avoided, minimized or reduced to a less-than-significant level by the adoption and implementation of mitigation measures.

### ASSESSORS PARCEL NUMBERS:

APN	Owner	Mailing Address	City	Zip Code
042-181-001-000	CDEC 535322 LLC	33141 Ledro Hyw	Bakersfield	93308-9767
042-181-002-000	CDEC 535322 LLC	33141 Ledro Hyw	Bakersfield	93308-9767
042-181-005-000	Sac & SJ Drainage Dist			
042-181-006-000	Danny & Jeffrey Lion	9500 S Dewolf	Selma	93662
042-211-001-000	CDEC 535322 LLC	33141 Ledro Hyw	Bakersfield	93308-9767
042-211-002-000	CDEC 535322 LLC	33141 Ledro Hyw	Bakersfield	93308-9767
042-211-005-000	Sac & SJ Drainage Dist			
042-211-006-000	Stephen Giffen	4949 N Crystal Ave Ste 120	Fresno	93705-0231
042-241-001-000	S R Gallery Inc	33141 Ledro Hyw	Bakersfield	93308-9767
042-241-002-000	CDEC 535322 LLC	33141 Ledro Hyw	Bakersfield	93308-9767
042-241-004-000	Columbia Canal Co	6770 Avenue 7 ½	Firebaugh	93622-9615
042-241-006-000	Sac & SJ Drainage Dist			

**Mitigated Negative Declaration for the  
Lower San Joaquin Levee District Public Law 84-99 Levee Rehabilitation Project**

**LEAD AGENCY:** The Central Valley Flood Protection Board (Board) of California is the lead agency under the California Environmental Quality Act for the Lower San Joaquin Levee District Levee Rehabilitation Project.

**AVAILABILITY OF DOCUMENTS:** The Board and the U.S. Army Corps of Engineers, the federal sponsor, have jointly prepared an Environmental Assessment/Initial Study for this proposed project which is available for review at the Department of Water Resources, Division of Flood Management, Levee Repairs Branch at 2825 Watt Avenue, Suite 100, Sacramento, California 95821. Questions or comments regarding this proposed mitigated negative declaration and initial study may be addressed to:

Ms. Deborah Condon, Environmental Program Manager  
Department of Water Resources  
Division of Flood Management  
Levee Repairs Branch  
2825 Watt Avenue, Suite 100  
Sacramento, California 95821  
(916)574-1426

**PROJECT LOCATION:** The project is comprised of 10 sites located in Madera County on the right and left banks of the Chowchilla Bypass approximately 1 mile downstream of the confluence with the San Joaquin River. The project sites are near the towns of Mendota in the south and Dos Palos in the north. Specific sites are indicated on the map shown on Plate 1 of the attached Environmental Assessment/Initial Study.

**PROJECT DESCRIPTION:**

The Board in partnership with the U.S. Army Corps of Engineers (Corps), the federal sponsor, has jointly prepared an Environmental Assessment/Initial Study for this proposed rehabilitation project under the Corps' Public Law 84-99 Rehabilitation Assistance for damaged levees. The Corps and Board propose to repair 10 sites on Chowchilla Bypass on the left and right levees damaged by through seepage and sand boils. The levees will be restored to the pre-flood condition. The right bank repairs will consist of three landside seepage berms totaling approximately 180 feet. The left bank repair will consist of a continuous slurry wall constructed along the center line of the levee for a total of approximately 15,840 feet. The Corps, with DWR cost share, will fund and contract for the work. The levees protect a 700-square mile area, which includes agriculture fields and the towns of Mendota, Firebaugh, and Dos Palos.

The landside berms will be constructed by removing the existing emergency gravel, placing drain rock, geotextile fabric and a layer of seeded topsoil. The slurry wall construction will remove the top two feet of levee crown, dig an approximately 18 foot deep trench along the levee crown center line, and back fill the trench with a bentonite/soil slurry. The levee crown will be rebuilt with an impervious layer topped with gravel on the road bed. Upon completion, all

rebuilt with an impervious layer topped with gravel on the road bed. Upon completion, all disturbed ground will be reseeded with native grasses. Construction will begin in August 2008 and take approximately 5 months.

The Board and the USACE directed the preparation of the initial study/mitigated negative declaration (IS/MND) on this proposed project in accordance with requirements of the California Environmental Quality Act (CEQA). The document describes the proposed project and potential environmental impacts, and concludes that any significant effects that may result from the proposed project can be avoided, minimized or reduced to a less-than-significant level by the adoption and implementation of mitigation measures.

**FINDINGS:** The initial study was prepared to evaluate the potential impacts of the proposed project on the environment and the significance of those impacts. Based on the initial study, the Board has determined that the proposed project will not have a significant impact on the environment following the implementation of the mitigation measures. This conclusion is supported by the following findings:

- The project will not result in impacts to agricultural resources, geology, mineral resources, soils, land use and planning, population and housing, and energy resources.
  - Although there are no known cultural resources that might be disturbed, mitigation is included to address the potential for discovering archaeological or paleontological resources and /or human remains during the construction phase of the project.
  - Although the project would have no known significant impacts from hazardous materials, mitigation is included that requires a hazardous materials management plan to address unforeseen hazardous events.
- The project will result in less than significant impacts to hydrology, aesthetics, public utilities, service systems, and recreation.
- Mitigation measures undertaken as part of the proposed project will reduce impacts to less than significant for biological resources such as San Joaquin kit fox (*Vulpes macrotis*), valley elderberry longhorn beetle (*Desmocerus californicus dimorphus*), and Swainson's hawk (*Buteo swainsoni*).
- Mitigation measures undertaken as part of the proposed project will reduce impacts to less than significant for water quality during construction.
- Mitigation would be undertaken as part of the proposed project that will reduce potentially significant impact to less-than-significant levels for temporary, short term, impacts during construction may result from the proposed project. These are: potential effects to air quality impacts from dust and emissions, and minor increases in traffic from construction vehicles. These short term impacts are not considered significant.

**MANDATORY FINDINGS OF SIGNIFICANCE:**

- No substantial evidence exists that the proposed project would not have a negative or adverse effect on the environment.
- The project would not substantially degrade the quality of the environment, significantly reduce the habitat for fish and wildlife species, result in fish or wildlife populations below a self-sustaining level, reduce or restrict the range of a special-status species, or eliminate important examples of California history or prehistory.
- The project would not achieve short-term environmental goals to the detriment of long-term goals.
- The project would not have environmental effects that would cause substantial direct or indirect adverse effects on humans.
- The project would not have environmental effects that are individually limited but cumulatively considerable.

**PROPOSED MITIGATION MEASURES:**

The following measures will be implemented to avoid or minimize potential environmental impacts. Implementation of these mitigation measures would reduce the potential environmental impacts of the proposed project to a less-than-significant level.

- Preconstruction surveys have located all elderberry shrubs. A 20-foot buffer zone will be maintained with flagging around all elderberry shrubs within the project footprint.
- No elderberry shrubs will be trimmed or disturbed without consultation with the USFWS.
- No pesticides will be used on the project site.
- Preconstruction surveys will locate any potential or active kit fox den sites. Exclusion zones of 50 feet will be maintained around any potential dens and 100 feet around any active dens.
- Speed limit will be 20 mph or less along access routes.
- All excavated, steep-walled holes or trenches more than 2 feet deep will be covered at the close of each working day by plywood or similar materials, or provided with one or more escape ramps constructed of earth fill or wooden planks. Before such holes or trenches are filled, they will be thoroughly inspected for trapped animals. If at any time a trapped or injured kit fox is discovered, the appropriate notifications will be made to USFWS and CDFG.

- All construction pipes, culverts, or similar structures with a diameter of 4-inches or greater that are stored at a construction site for one or more overnight periods will be thoroughly inspected for kit foxes before the pipe is subsequently buried, capped, or otherwise used or moved in any way. If a kit fox is discovered inside a pipe, that section of pipe should not be moved until the Service has been consulted.
- All food-related trash items such as wrappers, cans, bottles, and food scraps will be disposed of in closed containers and removed daily from the job site.
- No firearms or pets shall be allowed on the project site.
- Use of rodenticides and herbicides in project areas will be restricted.
- An employee education program will be conducted. The program will include a brief presentation by the site biological monitor in kit fox, VELB, and Swainson's hawk to all contractors and agency staff on the job site. The program will include the following: a description of the San Joaquin kit fox and its habitat needs; a report of the occurrence of kit fox in the project area; an explanation of the status of the species and its protection under the Endangered Species Act; and a list of measures being taken to reduce impacts to the species during project construction and implementation. A fact sheet conveying this information should be prepared for distribution anyone who may enter the project site.
- To avoid adverse effects to water quality, the contractor will implement best management practices to reduce the risk of material entering the water. The contractor will prepare a Storm Water Prevention Plan and a Hazardous Materials Management Plan. In-water construction activities will be restricted to low flow periods.
- All aspects of the Corps MOU with the State Historic Preservation Officer (SHPO) and the Advisory Council on Historic Preservation will be implemented to avoid or minimize effects of the project on historic properties. The levee repairs will restore the original prism shape of the levee. Field inspections will be conducted before project construction, and any historic properties discovered will be treated in accordance with the MOA. As stipulated by the MOA: (1) if the levee is the only historic property discovered within the APE, it will be documented, and (2) if any other unknown cultural resources within the APE that cannot be avoided by project construction are discovered during field inspections, they will be inventoried and evaluated.
- All disturbed areas on the project site will be stabilized and seeded with grasses and herbs to prevent erosion.

The project will incorporate all applicable mitigation measures provided above and listed in the Environmental Assessment/Initial Study. A finding of no significance (FONSI) from the Corps will be provided.



#### **APPROVAL OF INITIAL STUDY/MITIGATED NEGATIVE DECLARATION**

In accordance with Section 21082.1 of the California Environmental Quality Act, the Board has independently reviewed and analyzed the initial study and proposed mitigated negative declaration for the proposed project and finds that the initial study and proposed mitigated negative declaration reflect the independent judgment of the Central Valley Flood Protection Board. The lead agency further finds that the project mitigation measures will be implemented as stated in the mitigated negative declaration.

I hereby approve this project:

\_\_\_\_\_  
Jay Punia  
General Manager  
Central Valley Flood Protection Board of the State of California

Approved as to Legal for and Sufficiency

\_\_\_\_\_  
Nancy Finch  
Counsel

## ENVIRONMENTAL SIGNIFICANCE CHECKLIST

This checklist identifies physical, biological, social and economic factors that might be affected by the proposed project. In many cases, background studies performed in connection with the projects indicate no impacts. A NO IMPACT answer in the last column reflects this determination. Where there is a need for clarifying discussion, the discussion is included in Section VI following the checklist. The words "significant" and "significance" used throughout the following checklist are related to CEQA, not NEPA, impacts.

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporation	Less Than Significant Impact	No Impact
<b>I. AESTHETICS -- Would the project:</b>				
a) Have a substantial adverse effect on a scenic vista?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
This project is in an agricultural setting and will not change the profile of the levee.				
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Substantially degrade the existing visual character or quality of the site and its surroundings?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
This project is in an agricultural setting and will not change the profile of the levee.				
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<b>II. AGRICULTURE RESOURCES:</b> In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Dept. of Conservation as an optional model to use in assessing impacts on agriculture and farmland. Would the project:				
a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>



Potentially Significant Impact	Less Than Significant With Mitigation Incorporation	Less Than Significant Impact	No Impact
--------------------------------------	---	------------------------------------	--------------

III. AIR QUALITY -- Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations. Would the project:

a) Conflict with or obstruct implementation of the applicable air quality plan?

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
--------------------------	--------------------------	--------------------------	-------------------------------------

b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
--------------------------	--------------------------	--------------------------	-------------------------------------

c) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	--------------------------	-------------------------------------	--------------------------

The increase in fuel emissions related to this construction will be a short term addition to the project area. This project will not increase any criteria pollutant in a measurable quantity.

d) Expose sensitive receptors to substantial pollutant concentrations?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	--------------------------	-------------------------------------	--------------------------

Due to the rural nature of the project area, there should be no sensitive receptors present to be affected by the negligible pollutant quantities produced by this project.

e) Create objectionable odors affecting a substantial number of people?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	--------------------------	-------------------------------------	--------------------------

Due to the rural nature of the project area, there should be no sensitive receptors present to be affected by any odors produced by this project.

f) Global climate change due to greenhouse gas emissions?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	--------------------------	-------------------------------------	--------------------------

In January of this year Assembly Bill (AB) 32 the Global Warming Solutions Act of 2006 went into effect. This bill charged the California Air Resources Board (CARB) to develop regulations on how the state would address global climate change (GCC) due to greenhouse gas (GHG) emissions. There are currently no thresholds or recommended methodologies for determining the significance of a project's potential cumulative contribution to GCC in CEQA documents. However, an individual project does not generate enough GHG emissions to significantly influence GCC. Therefore, GCC are looked upon as being a cumulative impact to the environment rather than project specific. Potential ways the project would contribute to the generation of GHG emissions could be through short term construction of the project. Short-term air pollution in the form of particulate matter (fugitive dust) may be caused by construction activity including truck and equipment movement, grading, and earthwork. Best Management Practices will help mitigate potential emissions due to short term operation of the project.

IV. BIOLOGICAL RESOURCES -- Would the project:

a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	--------------------------	-------------------------------------	--------------------------

Mitigation measures will reduce the impacts to less than significant for valley elderberry longhorn beetle, San Joaquin kit fox and Swainson's hawk.

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporation	Less Than Significant Impact	No Impact
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or US Fish and Wildlife Service?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

San Joaquin kit fox could potentially utilize the project area as a migration path and be disturbed by the construction. This impact will be localized and short lived and would be less than significant.

e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

V. CULTURAL RESOURCES -- Would the project:

a) Cause a substantial adverse change in the significance of a historical resource as defined in §15064.5?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Disturb any human remains, including those interred outside of formal cemeteries?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Although there are no known cultural resources that might be disturbed, mitigation is included to address the potential for discovering archaeological or paleontological resources and /or human remains during the construction phase of the project

VI. GEOLOGY AND SOILS -- Would the project:

- a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporation	Less Than Significant Impact	No Impact
i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
ii) Strong seismic ground shaking?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
iii) Seismic-related ground failure, including liquefaction?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
iv) Landslides?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Result in substantial soil erosion or the loss of topsoil?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Topsoil will be disturbed creating a potential for erosion. This will be mitigated by the utilization of "Best Management Practices" and hydroseeding of all disturbed areas with native grasses at the completion of construction.

c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

## VII. HAZARDS AND HAZARDOUS MATERIALS --

Would the project:

a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporation	Less Than Significant Impact	No Impact
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
h) Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

VIII. HYDROLOGY AND WATER QUALITY -- Would the project:

a) Violate any water quality standards or waste discharge requirements?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) Otherwise substantially degrade water quality?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

During construction the surface soils would be disturbed creating the potential for water quality to be impacted by increased siltation during rainfall events. The project will use "Best Management Practices" to manage the disturbed soils and prevent their transport to adjacent water ways. Additionally, this project will be constructed during the dry season.

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporation	Less Than Significant Impact	No Impact
g) Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
h) Place within a 100-year flood hazard area structures which would impede or redirect flood flows?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
i) Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
j) Inundation by seiche, tsunami, or mudflow?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
IX. LAND USE AND PLANNING - Would the project:				
a) Physically divide an established community?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Conflict with any applicable habitat conservation plan or natural community conservation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
X. MINERAL RESOURCES -- Would the project:				
a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
XI. NOISE –				
Would the project result in:				
a) Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporation	Less Than Significant Impact	No Impact
d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Heavy equipment will be used during the construction of this project which is similar to the equipment utilized in the adjacent land as part of active agricultural activities.

e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
---	--------------------------	--------------------------	--------------------------	-------------------------------------

f) For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
--	--------------------------	--------------------------	--------------------------	-------------------------------------

#### XII. POPULATION AND HOUSING -- Would the project:

a) Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
---	--------------------------	--------------------------	--------------------------	-------------------------------------

b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
---	--------------------------	--------------------------	--------------------------	-------------------------------------

c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
---	--------------------------	--------------------------	--------------------------	-------------------------------------

#### XIII. PUBLIC SERVICES

a) Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:

Fire protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Police protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Schools?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Parks?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Other public facilities?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>



	Potentially Significant Impact	Less Than Significant With Mitigation Incorporation	Less Than Significant Impact	No Impact
<b>XIV. RECREATION –</b>				
a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<b>XV. TRANSPORTATION/TRAFFIC -- Would the project:</b>				
a) Cause an increase in traffic which is substantial in relation to the existing traffic load and capacity of the street system (i.e., result in a substantial increase in either the number of vehicle trips, the volume to capacity ratio on roads, or congestion at intersections)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Construction would create a short term increase of traffic on adjacent roadway that is not deemed to be significant.				
b) Exceed, either individually or cumulatively, a level of service standard established by the county congestion management agency for designated roads or highways?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Result in inadequate emergency access?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) Result in inadequate parking capacity?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
g) Conflict with adopted policies, plans, or programs supporting alternative transportation (e.g., bus turnouts, bicycle racks)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<b>XVI. UTILITIES AND SERVICE SYSTEMS –</b>				
Would the project:				
a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>



	Potentially Significant Impact	Less Than Significant With Mitigation Incorporation	Less Than Significant Impact	No Impact
c) Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
g) Comply with federal, state, and local statutes and regulations related to solid waste?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

#### XVII. MANDATORY FINDINGS OF SIGNIFICANCE –

a) Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

**DRAFT  
ENVIRONMENTAL ASSESSMENT/  
INITIAL STUDY**

**PUBLIC LAW 84-99  
LOWER SAN JOAQUIN  
LEVEE REPAIR PROJECT  
MADERA COUNTY CALIFORNIA**

**JUNE 2008**



**U.S. Army Corps  
Of Engineers**

## **Need for the Proposed Action**

Between 28 December 2005 and 9 January 2006, the State of California experienced a series of severe storms, which damaged the levees in California's Central Valley. Water rose a second time in April 2006 and high water remained in some parts of the system until June. Many rivers and streams within the Sacramento and San Joaquin River Basins were above flood stage during these events and experienced significant erosion and seepage problems with the levees. The State of California Department of Water Resources and/or their maintaining agencies conducted flood fight activities while the U.S. Army Corps of Engineers (Corps) has been working with the State to restore the levee systems to pre-flood conditions. These efforts have been conducted under the authority of Public Law (PL) 84-99, Rehabilitation of Damaged Flood Control Works.

The Lower San Joaquin Levee District and Granite Construction placed rock on the landside levee slope and monitored the levees to prevent levee failure during the flood event. The emergency repairs did not repair the levee stability problem caused by the flooding or return the levees to pre-flood level of protection. Table 1 describes the length and width of the levee damage, type of damage, and the emergency levee repair used during the flooding. Plate 1 shows the location of the repair sites in the Lower San Joaquin Levee District.

The project areas are located in western Madera Counties, approximately 5 miles northeast of Mendota. These areas are located in the Mendota Dam U. S. Geological Service Quadrangle. The project area includes 3 miles along the Chowchilla Bypass south of Avenue 7. The repair sites are located on the left and right bank of the Chowchilla Canal (between Eastside Bypass and San Joaquin River). The levees protect a 700-square mile area, which includes agriculture fields and the towns of Mendota, Firebaugh, and Los Palos. Plate 1 shows the location of the 25 sites the levee district flood fought during the flood event. Table 1 describes each of the sites that were flood fought by the local levee district.

The proposed project would repair several landside sand boils and levee seepage sites in the Lower San Joaquin Levee District. The damaged levees would be restored to pre-flood level of protection. The project would be cost shared with the State of California under the PL 84-99 program. The proposed project would repair 15,840 feet of the left levee and 3,900 feet of the right levee of the Chowchilla Bypass.

Table 1. 2005-2006 Emergency Flood Fight Actions and Damage Description

Site Number	Length (Feet)	Width (Feet)	Damage	Emergency Levee Repair
<b>RIGHT BANK CHOWCHILLA CANAL</b>				
8	40	20	Boil	Landside Berm
9	100	40	Boil	Levee Monitor
10	40	20	Boil	Landside Berm
<b>LEFT BANK CHOWCHILLA CANAL</b>				
14	70	50	Boil and Levee Seepage	Landside berm
15	50	50	Boil	Landside Berm
16	50	50	Boil	Landside Berm
17	50	50	Boil	Landside Berm
18	50	50	Boil	Landside Berm
19	75	50	Boil	Landside Berm
20	300	50	Levee Seepage	Landside Levee Slope Rock and Geotextile Fabric Protection
21	3,300	50	Levee Seepage	Landside Levee Slope Rock and Geotextile Fabric Protection

### Alternatives Not Considered in Detail

#### Construct Underseepage Berm at Sites with no Berm

This alternative would be constructed at the sites that do not have underseepage berms. A 3-foot-deep drainage trench would be excavated along the landside levee toe and filled with drainage rock that is placed on top of a 6-inch layer of filter sand. Once the drainage trench is completed, an 80-foot wide underseepage berm would be built on top of the drainage trench. The underseepage berm would be covered by geotextile fabric, which is then covered by 1-foot layer of soil. The levee and soil on top of the underseepage berm would be seeded with native grasses.

#### Construct New Underseepage Berm and Toe Trench Drains

First, rock protection on the landside levee slope would be removed and taken to the staging area. The damaged levee would be excavated to the ground level and rebuilt out of soil that would be compacted and graded to match the size and shape of the adjacent undamaged section of the levee. After the levee is rebuilt, the drainage trench and underseepage berm would be built the same way as the alternative described above.

Both of these alternatives provide the same level of protection as the proposed alternative, but at a higher cost, therefore neither of these alternatives are considered in detail and will not be considered further in this document.

## Alternatives

### No Action

The National Environmental Policy Act requires the lead agency to present a no action alternative that establishes the baseline environmental conditions. The baseline environmental conditions would be used to determine the type and magnitude of the affect each alternative would have on the environmental and socioeconomic resources in the project area. The no action alternative is used to determine if the project would have a significant adverse effect on environmental resources. Under the no action alternative, the Corps would not repair the damaged levees. The nonfederal sponsor would be responsible for the funding and labor to repair the damaged levees.

If the levees are not completely repaired they would continue to degrade and fail during future flood events. Due to the reasons stated above, this alternative is not recommended.

### Proposed Project

The proposed project would use two construction methods to repair the damaged levees along the San Joaquin River and Chowchilla Canal. A slurry wall would be used to repair sites 14 through 21. A landside berm would be constructed at sites 1 through 10. There would be three different construction methods used to construct the landside berm. The various landside berm construction methods would have the same affect on the environmental resources. The specific construction method used would be determined by the flood fighting methods used during the high flow event, landside topography, and the specific damage that occurred during the high flow event. Table 2 describes the length and construction method proposed for each repair site.

**Table 2. Project site repair methods.**

Site Number	Water Body	Lenth (ft)	Repair Type
20060404-001-008	Chowchilla Canal, Right	40	Seepage Berm on Landside, No Waterside Work
20060404-001-009	Chowchilla Canal, Right	100	Seepage Berm on Landside, No Waterside Work
20060404-001-010	Chowchilla Canal, Right	40	Seepage Berm on Landside, No Waterside Work
20060404-001-014	Chowchilla Canal, Left	*	Slurry Wall, Waterside Spoil & Recrowning
20060404-001-015	Chowchilla Canal, Left	*	Slurry Wall, Waterside Spoil & Recrowning
20060404-001-016	Chowchilla Canal, Left	*	Slurry Wall, Waterside Spoil & Recrowning
20060404-001-017	Chowchilla Canal, Left	*	Slurry Wall, Waterside Spoil & Recrowning
20060404-001-018	Chowchilla Canal, Left	*	Slurry Wall, Waterside Spoil & Recrowning
20060404-001-019	Chowchilla Canal, Left	*	Slurry Wall, Waterside Spoil & Recrowning
20060404-001-020	Chowchilla Canal, Left	*	Slurry Wall, Waterside Spoil & Recrowning

\* These sites are linked in a continuous reach of 15,840 feet.

### Slurry Wall Construction (Plate 2)

The repair alternative will result in the construction of a 2 foot wide cement-bentonite slurry wall trench through the centerline of the levee to a depth of approximately 18 feet. Construction will start with the first two feet of the levee crown being removed. Then construction of the slurry wall will continue with the pre-excavation of 2 foot wide by 5 foot deep trenches excavated in 30 foot segments along the centerline of the levee. These trenches will be filled with cement-bentonite slurry. This pre-excavation procedure is performed to prevent trench cave-in at the upper end of the excavation and this initial excavated material will be wasted on the waterside of the levee.

The excavator will then make a second pass and deepen the existing trench to a depth of approximately 18 feet. This depth will be determined based on the levee and subsurface soils and seepage analyses. Typically, the slurry wall will extend about 12 feet deep through the levee and about 6 feet deep through the parent material below the levee. Excess excavated material will be temporarily wasted on the waterside of the levee and excess hauled away to an approved disposal site.

After the slurry wall is completed, the levee crown would be restored. Levee road would be repaired once construction is completed and would serve as a cap to the slurry wall

The slurry plant would be set up in approved staging areas where slurry will be delivered to the trenches via a hose that extends up to 0.5 mile from the plant. Therefore one plant set up can reach a 1-mile section of levee. This process will result in a levee cut-off wall with a very low permeability of approximately  $1 \times 10^{-6}$  cm/sec.

The slurry wall would be 15,840 feet long. The slurry wall would start at Site 14 and end approximately 5,280 feet north of the Chowchilla-San Joaquin confluence.

### Landside Seepage Berm (Plate 3)

This geotextile fabric and gravel placed on the landside levee slope during the flood fighting did not meet Corps standards and the length and thickness of the berms were not adequate to prevent future levee failure. Consequently the alternative consists of removing the berms and geotextile placed during the flood fight. The removed drain rock would be stockpiled and reutilized for the construction of the new landside seepage berms. The underseepage berm will have a 3-foot thick layer of drain rock placed on 0.5 foot thick layer of filter sand. The levee landside slope will be reconstructed and the drain rock will be covered with geotextile fabric and a layer of top soil. The top soil would be seeded with native grasses.

Based on the size and length of the landside seepage berm, approximately 1,025,600 cubic yard of soil, sand, and drain rock would be used during construction. Any gravel used during the emergency flood fighting would be reused in the landside

seepage berm. The landside seepage berm would be approximately 180 feet long. The patrol road would be repaired once construction of the berm is completed.

#### Construction Schedule

Construction would occur during the summer or early fall of 2008.

#### Haul Route

The haul route to and from the repair sites would include the levee patrol road, State Highway 152, West Whitesbridge Avenue, Avenue 7, Firebaugh Boulevard, and Chowchilla Canal Road. The exact haul route would be determined by the contractor and approved by the Corps. The contractor would be responsible for obtaining any required permits regarding the proposed haul route.

#### Staging Area, Borrow, and Disposal Sites

Staging areas would include top and landside area of the levee. The exact location, size, and number of staging areas would be determined by contractor. All staging areas must be approved by the Corps before the contractor is allowed to use the staging area. The staging areas will be located in areas where there would be no adverse effect to the environment. Borrow and disposal sites would be determined by the contractor and approved by the Corps. Borrow and disposal sites must be established commercial sites near the project area.

#### Possible Construction Equipment

The exact number and type of construction equipment used during construction would be determined by the contractor. Possible equipment that would be used during construction would include haul trucks, several excavators, slurry mixing plant, dozers, and frontend loaders.

### **Environmental Resources Affected by the Proposed Action**

#### **Resources Eliminated from Detailed Analysis**

The potential for significant effects was evaluated for each resource area. Due to the low probability of significant adverse effects, the following resource areas were eliminated from detailed analysis.

#### **Climate**

Climate in the project area is typical for the region. Summers tend to be warm and dry and the winters are cooler and wet. Most of the rain fall occurs in the winter months. This project would not affect climate.



## **Recreation**

The project area is in a rural area with limited public access. The land surrounding the levees is private property. There is very little recreation activity in or near the project area. Since there is little to no recreation activity in the project area, the project would have little to no effect on recreation.

## **Socioeconomics and Agriculture**

This project exists in a rural area with only a few scattered residences. Project activities would only restore the area to the pre-flood conditions; therefore construction activities would not result in changes to land use or the human environment. Construction would have no effect on the social or economic conditions in the area. There are no minority or low-income families in the project area. Residents protected by these levees would equally benefit from this project.

Construction would not adversely affect agriculture operations in or near the project area. No farmland would be lost to construction of this project. The repaired levees would decrease the chance of flood damage.

## **Noise**

This project is located in a rural region adjacent to agricultural fields. Due to the rural nature of the project area, noise generated by construction activities is not expected to affect sensitive receptors or have significant negative affects. For this reason, noise is not discussed in this EA.

## **Esthetics**

The project would change the shape of the landside levee slope at several sites along the levee. The levee slope would change from a gentle slope ending at ground level to a levee slope with a 40 foot wide berm. Since there are no sensitive receptors due to the rural undeveloped nature of the project area, the project would not have a noticed affect on esthetics.

## **Air Quality**

Some pollution from dust and exhaust would be release during construction. The amount would not be significant to affect local air quality. There are very few sensitive receptors near the project area that would be affected by construction. There would be no long term effects on air quality. Since construction would be short in duration and spread out over a large area the project would have little affect on air quality.

## Water Quality

Construction would occur on the landside or levee crown of the levee. Best management practices would be used during construction to prevent sediment from entering the waterway during construction. Equipment fueling and staging areas would occur away from any waterway. Due to the construction location and best management practices, the project would have no effect on water resources.

## Vegetation and Wildlife

### Existing Conditions

Two site visits were conducted by San Joaquin District Environmental Services Section, on 25 April 2008 and another on 28 April 2008. On 25 April 2008, three environmental scientists conducted walking transects along the Chowchilla Bypass covering 3 miles. Surveyors walked along both the waterside and the landside of the levee approximately 10-15 meters apart; surveys were started at the downstream portion of the project area.

During both site visits, a plant list was created to help identify potential communities and habitats that could support special status plants and animals. All plant species encountered were either identified on site or collected and later identified using Hickman (1993), or Munz (1963). Bird species were identified by sight or sound, and special attention was paid to identify any potential Burrowing Owl burrows. Surveys for mammals included identifying potential, active, or atypical San Joaquin kit fox dens and small mammal burrows. Focused surveys for small mammal burrows characteristic of kangaroo rat (*Dipodomys* sp.) or pocket mouse (*Chaetodipus* sp. or *Perognathus* sp.) were also conducted.

The land side of the Chowchilla Bypass can be characterized as non native grassland; the waterside of the Bypass can be considered an intermittent stream with non native grasses as the dominant plants. The grasses were very dense with approximately 75 to 85 percent cover with the remainder having bare ground and a number of areas that had been burned. The height, type, and density of the vegetation on the levee slope are affected by levee maintenance. Levee maintenance actions include mowing and controlled burns.

The San Joaquin River is dry along this reach. There are three dominant habitat types along this portion of the river including Great Valley Cottonwood Riparian Forest, non native grassland, and riparian scrub. Dominant species in the Cottonwood Riparian areas include Fremont cottonwood (*Populus fremontii*), Gooding's black willow (*Salix goodingii*), box elder (*Acer negundo*), and ash (*Fraxinus latifolia*). The non native grassland was dominated by red brome (*Bromus madritensis rubens*), ripgut (*B. diandrus*), soft chess (*B. hordeaceus*), and fireweed (*Amsinckia menziesii* ssp. *menziesii*). The riparian scrub includes dense patches of mugwort (*Artemisia douglasiana*), nettle (*Urtica dioica*), blackberry (*Rubus* sp.), and wild rose (*Rosa californica*).

Two to three side-blotched lizards (*Uta stansburiana*) were observed near each photo point, and two whiptails (*Aspidoscelis tigris*) were seen along the San Joaquin River. Western fence lizards (*Sceloporus occidentalis*) were also present. Two white-lined sphinx moths (*Hyles lineate*) were observed foraging on heliotrope nectar between miles 1.5-2.5 within the Bypass. During walking surveys, small mammal burrows (approximately 2 inches in diameter) were observed between mile 0-0.1 and mile 2.0-3.0 of the work site. Scat and grass clippings were found outside of burrows, indicating the possible presence of kangaroo rats or pocket mice on the site. There is not a large presence of California ground squirrels (*Spermophilus beecheyi*) in the area. Between miles 1.0-1.2 there were burrows (approximately 3-4 inches in diameter) that had fresh ground squirrel scat near the entry. Alarm calls of squirrels were heard, but none were seen. Signs of old gopher activity were also observed.

**Bird species observed during the field survey:**

Great Egret (*Ardea alba*)  
White-faced Ibis (*Plegadis chihi*)  
Mallard (*Anas platyrhynchos*)  
Red-tailed Hawk (*Buteo jamaicensis*)  
Swainson's Hawk (*Buteo swainsoni*)  
Northern Harrier (*Circus cyaneus*)  
American Kestrel (*Falco sparverius*)  
California Quail (*Callipepla californica*)  
Killdeer (*Charadrius vociferous*)  
Mourning Dove (*Zenaida macroura*)  
Great Horned Owl (*Bubo virginianus*)  
Western Kingbird (*Tyrannus verticalis*)  
Loggerhead Shrike (*Lanius ludovicianus*)  
Barn Swallow (*Hirundo rustica*)  
Cliff Swallow (*Petrochelidon pyrrhonota*)  
American Crow (*Corvus brachyrhynchos*)  
Western Scrub Jay (*Aphelocoma californica*)  
Northern Mockingbird (*Mimus polyglottos*)  
European Starling (*Sturnus vulgaris*)  
Western Meadowlark (*Sternella neglecta*)  
Brown-headed Cowbird (*Molothrus ater*)  
Brewer's Blackbird (*Euphagus cyanocephalus*)  
Red-winged Blackbird (*Agelaius phoeniceus*)  
Bullock's Oriole (*Icterus bullockii*)  
California Towhee (*Pipilo crissalis*)  
White-crowned Sparrow (*Zonotrichia leucophrys*)  
Song Sparrow (*Melospiza melodia*)  
House Finch (*Carpodacus mexicanus*)

## **Project Effects**

Construction of the slurry wall would affect 5.5 acres of non-native grassland. Construction of the landside levee berm would affect 6.0 acres of non-native grassland on the landside of the levee. The size of the staging area would be determined by the contractor. It is anticipated the staging area would affect 1.0 acres of non-native grassland on the landside of the levee.

Any wildlife in or near the project area could be disturbed or displaced by the construction noise and activity. This would be a short term effect and wildlife would be expected to return to the project area after construction is completed. To avoid or minimize any disturbance of wildlife, construction would be conducted during the late summer months. If construction occurs during the nesting or breeding season, a qualified biologist would survey the area prior to initiating construction. If active nests are located, the Corps would work with the U.S. Fish and Wildlife Service (Service) to establish a protective buffer area around the active nest. The protective buffer zone would be observed until the nest is no longer active.

## **Mitigation**

All disturbed areas would be seeded with native grasses. Clearing and grubbing would be as minimal as possible. Construction would occur in the late summer or early fall after the migratory bird nesting season. If construction would occur during the migratory bird nesting season, a survey would be conducted to locate any active nest in or near the project area and haul route. Active nest would be avoided in accordance with guidance from resource agencies until the nest is no longer active.

## **Traffic**

### **Existing Conditions**

Local roadways in the project area include State Highway 152, West Whitesbridge Avenue, Avenue 7, Firebaugh Boulevard, and Chowchilla Canal Road. These roadways provide local residents with access to large roads and Highways such as State Highways 99 and 152. On top of the levees are one lane gravel patrol roads that do not have public access. State Highway 152 connects State Highway 99 to State Route 5 through Los Banos. Traffic in the project area includes trucks, cars, motorcycles, and commercial trucks on the paved roads. During the harvest or planting season, there is an insignificant increase in farm equipment and agriculture worker vehicles in the project area.

## **Project Effects**

Construction would increase traffic on nearby roadways as workers commute and trucks travel to and from the project area. Trucks would also use State Highway 99 and 152 to transport construction equipment and materials to the project area, as well as

remove waste materials from the project area. The short-term traffic volume increase would be insignificant. Since traffic is minimal in the project area, there would be no noticeable affect to the local traffic patterns. No long-term traffic effects are anticipated.

### **Mitigation**

No mitigation measures are proposed.

### **Endangered Species**

#### **Existing Conditions**

Prior to the field visits, a query of the California Natural Diversity Database (CNDDB, 2008), the species list webpage of the Service website (USFWS, 2008), and the California Native Plant Society's Inventory of Rare and Endangered Plants of California was run for the Mendota Dam USGS topographic quadrangle. These queries were made to develop a list of special status species that are either known to occur or are likely to occur within in the project vicinity. Table 3 is the compiled list of special status species potentially occurring in the project area and considered during biological surveys.

Two site visits were conducted by San Joaquin District-Environmental Services Section, on 25 April 2008 and another on 28 April 2008. On 25 April 2008, three environmental scientists conducted walking transects along the Chowchilla Bypass covering 3 miles. Raptor nest surveys were initiated on 7 April 2008 and will be conducted throughout the breeding season (August).

Table 3. Potential special status species.

Common Name	Scientific Name	Federal Status	State Status	CNPS	Occurrence in project area
Plants					
Heartscale	<i>Atriplex cordulata</i>	FSC		1B	not observed during field surveys
Lesser saltscale	<i>Atriplex minuscula</i>	FSC		1B	
Subtle orache	<i>Atriplex subtilis</i>			1B	not observed during field surveys Subtle orache
Sanford's arrowhead	<i>Sagittaria sanfordii</i>			1B	no suitable habitat exists in project area
Invertebrates					
Vernal pool fairy shrimp	<i>Branchinecta lynchi</i>	FT		NA	not observed during field surveys-presence unlikely
Valley elderberry longhorn beetle	<i>Desmocerus californicus dimorphus</i>	FT		NA	potential habitat exists in project area
Amphibians					
California tiger salamander	<i>Ambystoma californiense</i>	FT	SSC	NA	no suitable habitat exists in project area
California red-legged frog	<i>Rana aurora draytonii</i>	FT	SSC	NA	no suitable habitat exists in project area
Reptiles					
Western pond turtle	<i>Actinemys marmorata</i>	FSC	SSC	NA	no suitable habitat exists in project area
Silvery legless lizard	<i>Anniella pulchra pulchra</i>	FSC	SSC	NA	no suitable habitat exists in project area
Blunt-nosed leopard lizard	<i>Gambelia sila</i>	FE	SE, SFP	NA	no suitable habitat exists in project area
Giant garter snake	<i>Thamnophis gigas</i>	FT	ST	NA	no suitable habitat exists in project area
Birds					
Western Burrowing Owl	<i>Athene cunicularia hypugaea</i>	FSC	SSC	NA	potential habitat exists in project area

Common Name	Scientific Name	Federal Status	State Status	CNPS	Occurrence in project area
Swainson's Hawk	<i>Buteo swainsoni</i>		ST	NA	potential nesting trees are approximately mile to east
Western yellow-billed cuckoo	<i>Coccyzus americanus occidentalis</i>	FSC	SE	NA	lack of suitable habitat makes presence unlikely
Bald Eagle	<i>Haliaeetus leucocephalus</i>	FT	SE	NA	has been found nesting along the Chowchilla Bypass
Bank swallow	<i>Riparia riparia</i>		ST	NA	lack of suitable habitat makes presence unlikely
<b>Mammals</b>					
San Joaquin antelope squirrel	<i>Ammospermophilus nelsoni</i>		ST	NA	lack of suitable habitat makes presence unlikely
Fresno kangaroo rat	<i>Dipodomys nitratoide exilis</i>	FE	SE	NA	lack of suitable habitat makes presence unlikely
Western mastiff bat	<i>Eumops perotis californicus</i>	FSC	SSC	NA	not observed during field surveys-no roosting sites along proposed pipeline corridor
San Joaquin pocket mouse	<i>Perognathus inornatus inornatus</i>	FSC	SSC	NA	potential habitat exists in project area
San Joaquin kit fox	<i>Vulpes macrotis mutica</i>	FE	ST	NA	corridor; potential foraging habitat



The only species that may occur in the project area include the San Joaquin kit fox (*Vulpes macrotis mutica*), Swainson's hawk (*Buteo swainsoni*), and valley elderberry longhorn beetle (*Desmocerus californicus*). A description of each of the species and their habitat use in the project area is described below.

#### San Joaquin Kit Fox

Kit fox are nocturnal canine with an average body length of 20 inches and height of 12 inches. They weight approximately 5 pounds. Kit fox are gray to dark red with large ears. Kit fox usually occupy underground dens and forage in grasslands near seasonal wetlands and marshes. The breeding season begins in September when females construct their pupping dens and end in January. Kit foxes may migrate through the project area looking for denning and foraging habitat. The kit fox would use the upland grass habitat for foraging.

No potential, active, or typical San Joaquin kit fox dens were observed during walking surveys. Kit fox pray species is present in the project area.

#### Swainson's Hawk

Swainson's hawks breed in California and over winter in Mexico and South America. Swainson's hawks usually arrive in the Central Valley between March 1 and April 1, and migrate south between September and October. Swainson's hawks nest usually occur in trees near the edges of riparian stands, in lone trees or groves of trees in agricultural fields, and in mature roadside trees. Valley oak, Fremont cottonwood, walnut, and large willow with an average height of about 58 feet, and ranging from 41 to 82 feet, are the most commonly used nest trees in the Central Valley. Suitable foraging areas for Swainson's hawk include native grasslands or lightly grazed pastures, alfalfa and other hay crops, and certain grain and row croplands. These hawks primarily feed on voles; however, they will feed on a variety of prey including small mammals, birds, and insects.

Raptor nest surveys were initiated on 7 April 2008 and will be conducted throughout the breeding season (August). Trees are surveyed for potential nests; breeding behavior near the trees continues to be monitored. Global Positioning System points have been taken where nest sites have been identified. Three days of surveys took place in April; four active Swainson's Hawk nests were identified in the project area (Plate 4). The surveys will continue through the summer until all fledglings have left the nests.

#### Valley Elderberry Longhorn Beatle

Valley elderberry longhorn beetle (beetle) is endemic to the elderberry plant. Elderberry plants usually grow in riparian habitat or upland habitat that has good access to surface or ground water. Adverse affect to the elderberry shrub would have an adverse affect to the beetle since the shrub is critical for the beetle's survival.

Approximately fifty-one elderberry shrubs were identified in the area (Plate 5). Thirty-two shrubs were identified along Willow Slough; most of these shrubs are outside the right-of-way, but a few are located at the toe of the levee on the landside. The closest elderberry shrub to the construction site would occur approximately 100 feet from the northern end of the slurry wall. This elderberry shrub is growing along the edge of the river in riparian habitat. Most of the elderberry shrub would over 100 feet from the potential haul route.

### **Project Effects**

Noise and construction activity would disturb or displace endangered species in or near the project area. The proposed project would affect approximately 12.5 acres of non native vegetation on the levee slope and staging areas. Once construction is completed, disturbed areas would be reseeded with native grasses.

Noise and construction activity would cause any kit fox in or near the project area to leave till construction is completed. Any potential kit fox dens within the foot print of the seepage berms would be destroyed when the seepage berm is constructed. Since there were no active dens observed during previous field surveys and there is substantial habitat in the area for denning and foraging active, the project would not have a direct effect on kit fox. The project would temporarily affect the migration and foraging pattern of kit foxes in the area. These patterns would return to pre-construction patterns.

Noise and construction activity would temporarily affect the migration and foraging patterns of Swainson's hawk in the area. Swainson's hawks would avoid the area during construction. Since construction would occur outside of the nesting season, no Swainson's hawks nests would be affected by construction. Swainson's hawk migration and foraging patterns would return to pre-construction patterns once construction is completed.

Since there are no elderberry shrubs within 100 feet of the construction site, there would be no anticipated adverse affect on the valley elderberry longhorn beetle.

### **Mitigation**

Mitigation and avoidance measures in the Service's Standardized Recommendations for Protection of the San Joaquin Kit Fox Prior to and During Ground Disturbance would be incorporated into the project. With these measures in place, this project would not directly affect kit fox.

Construction would occur in the late summer after Swainson's hawk nesting season. If construction would occur during the nesting season, a survey would be conducted to locate any active nest in or near the project area and haul route. Active nest would be avoided in accordance with guidance from resource agencies until the nest is no longer active.

Consultation with the Service would be initiated if elderberry shrubs are found within 100 feet of the construction site.

### **Cultural Resources**

On December 20, 2006, to comply with Section 106 of the National Historic Preservation Act (NHPA), and in consultation with the State Historic Preservation Officer and the Advisory Council on Historic Preservation, the Corps executed a Memorandum of Agreement (MOA) for the Order 3, 4 and 5 PL 84-99 projects. The MOA stipulates a series of steps to take in order to take into account the effects of the project on historic properties. It also determines that for the purposes of the undertaking only, the Sacramento and San Joaquin River Basins levee system will be considered eligible for listing in the National Register of Historic Places (NRHP).

In order to obtain a determination of no adverse effect on the levee systems, the MOA allows that when the levee repairs will restore the original prism shape of the levee, the project will not adversely affect historic properties. When the levee or associated features are the only historic properties that will be adversely affected by the proposed project, the Corps will prepare documentation similar to Historic American Buildings Survey/Historic American Engineering Record (HABS/HAER) Level IV inventory cards showing the historic property before and after levee repair. Additionally, as stipulated by the MOA, potentially interested Native Americans will be sent letters asking for their comments and information on areas of concern.

A records and literature search for the presence of cultural resources within the area of potential effects (APE) was conducted at the Northwest Information Center of the California Historical Resources Information System, located at California State University, Sonoma on December 13, 2006. The search was negative for known cultural resources within the APE. Field inspections of the APE will be conducted before project construction and any historic properties discovered will be treated in accordance with the MOA. As stipulated by the MOA: (1) if the levee is the only historic property discovered within the APE it will be documented, and (2) if any other unknown cultural resources within the APE that cannot be avoided by project construction are discovered during field inspections, they will be inventoried, evaluated, and their eligibility to the NRHP will be consulted on separately with SHPO. Because the MOA has been executed the project is in full compliance with Section 106 of the NHPA.

### **Conclusion**

The proposed project would temporarily affect vegetation and wildlife, traffic, and endangered species. Avoidance and compensation measures would be incorporated into the project to avoid adverse effect to the kit fox and Swainson's hawk. Disturbed areas would be restored to pre-construction condition. There would be no long-term adverse effect to environmental resources. This document will be circulated for a 30-day public review. All comments will be considered in preparation of the final EA. Since no

significant adverse effects are expected, a draft Finding of No Significant Impact is included as part of this document for review.

### **Cited Reference**

CNDDDB. 2008. California Diversity Database. California Department of Fish and Game. Government Version. Expiration Date: 9/30/2008

Hickman, James C. 1993. The Jepson Manual. University of California Press, Berkeley, CA. 1400pp.

Munz, Phillip A., and David D. Keck. 1963. A California Flora. University of California Press, Berkeley and Los Angeles. Second Edition. 1681 pp.

U.S. Fish and Wildlife Service (USFWS). 2008. Creating Endangered Species Lists. Sacramento Field Office. Web address: [http://sacramento.fws.gov/es/spp\\_list.htm](http://sacramento.fws.gov/es/spp_list.htm).

U.S. Fish and Wildlife Service (Service). 1999. Conservation Guidance for the Valley Elderberry Longhorn Beetle. Sacramento Field Office.

### **Agencies and Persons Consulted**

U.S. Fish and Wildlife Service. Doug Wienrick. Chief, Habitat Conservation Division. Sacramento Fish and Wildlife Service.

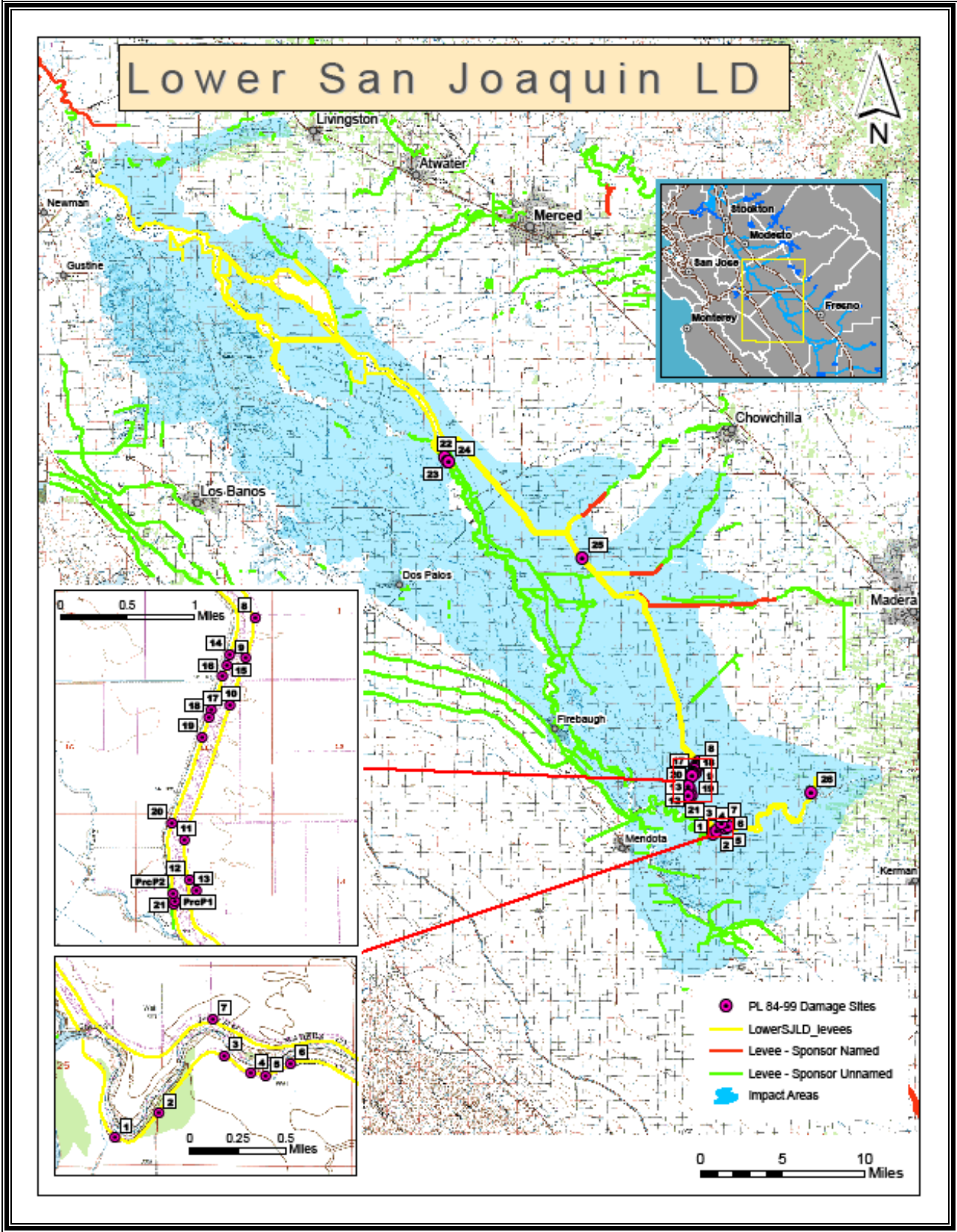
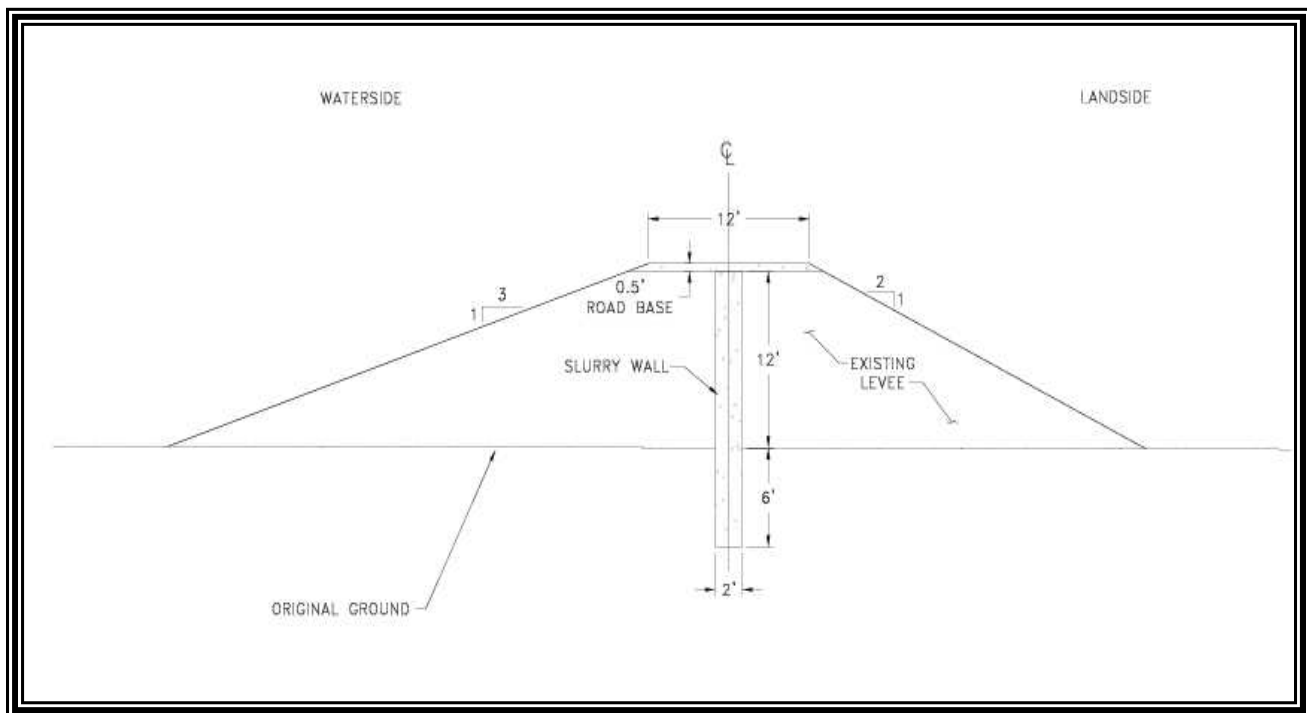
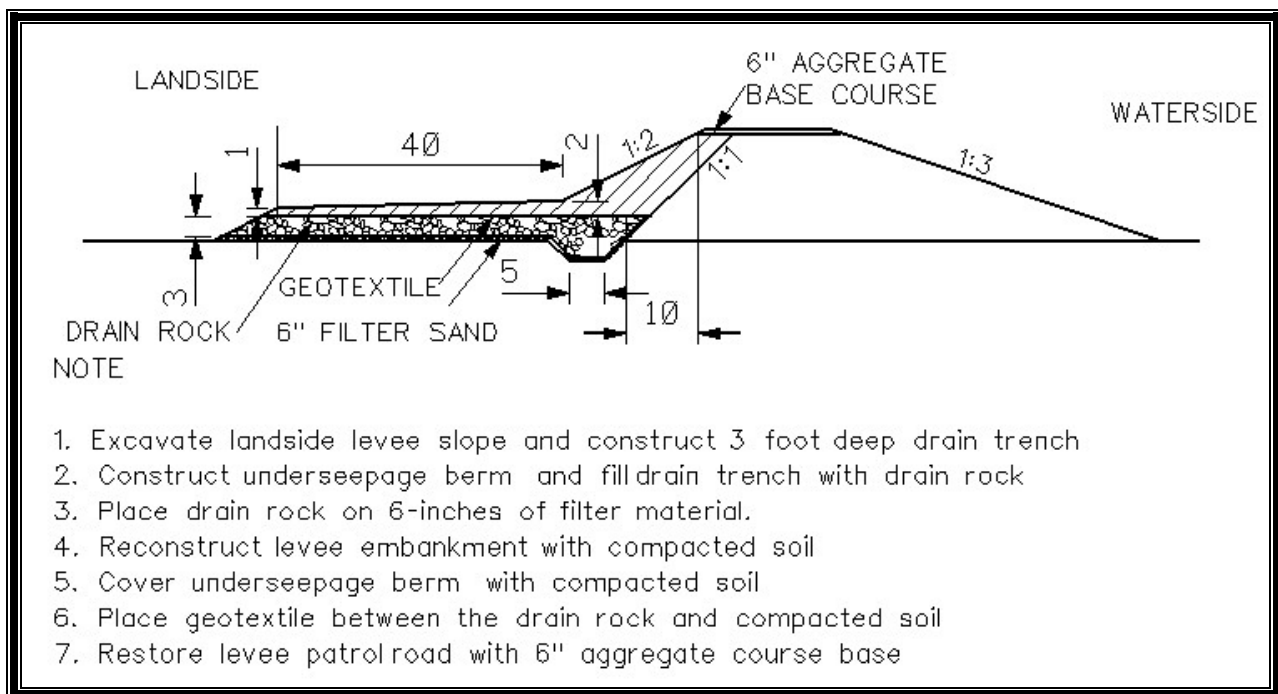


Plate 1: Project Area and Repair Site Location Map



**Plate 2: Cross Section for Slurry Wall Construction**



**Plate 3: Cross Section of Typical Landside Berm Construction**

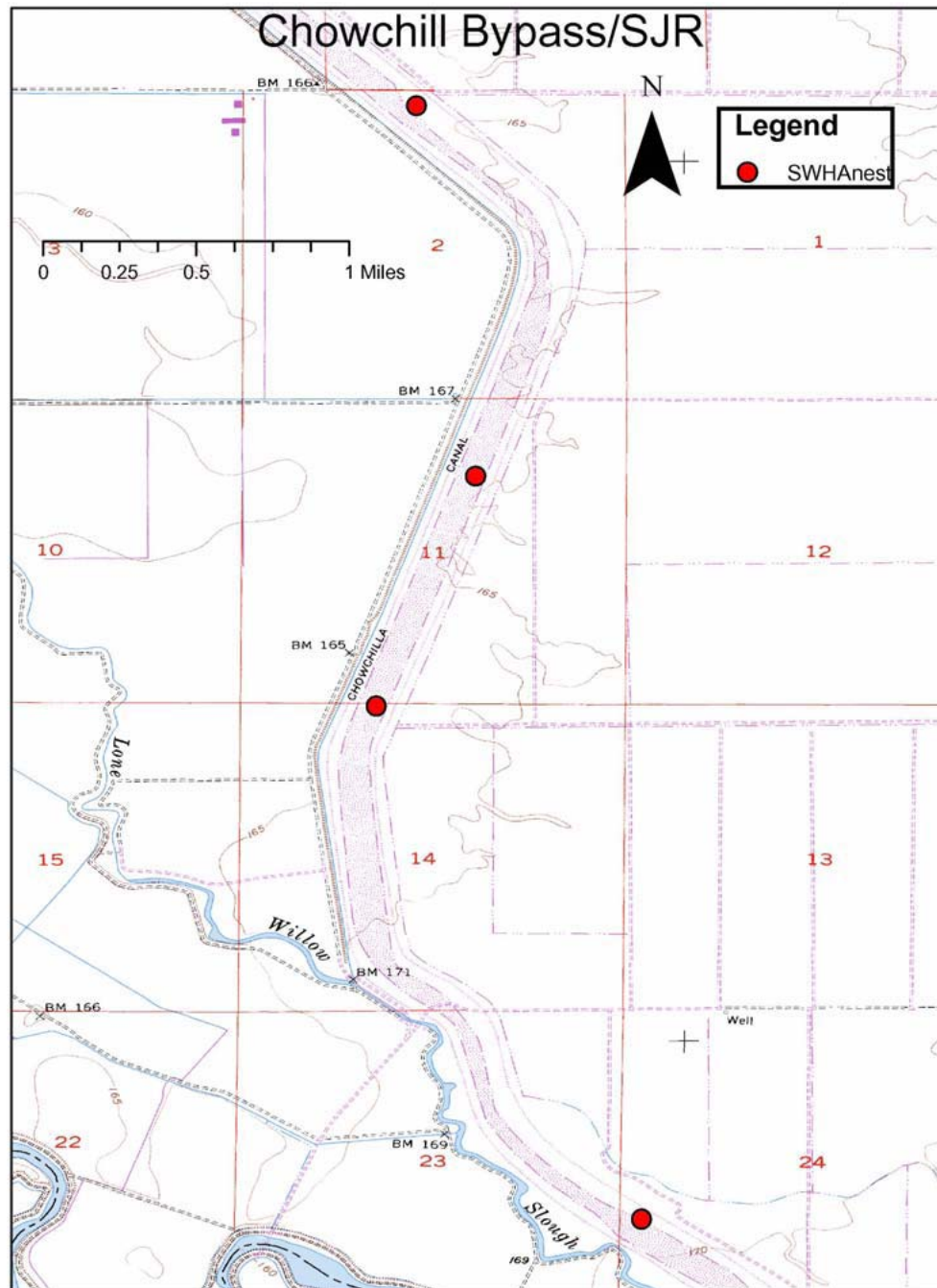


Plate 4. Location of Potential Swainson's Hawk Nests.



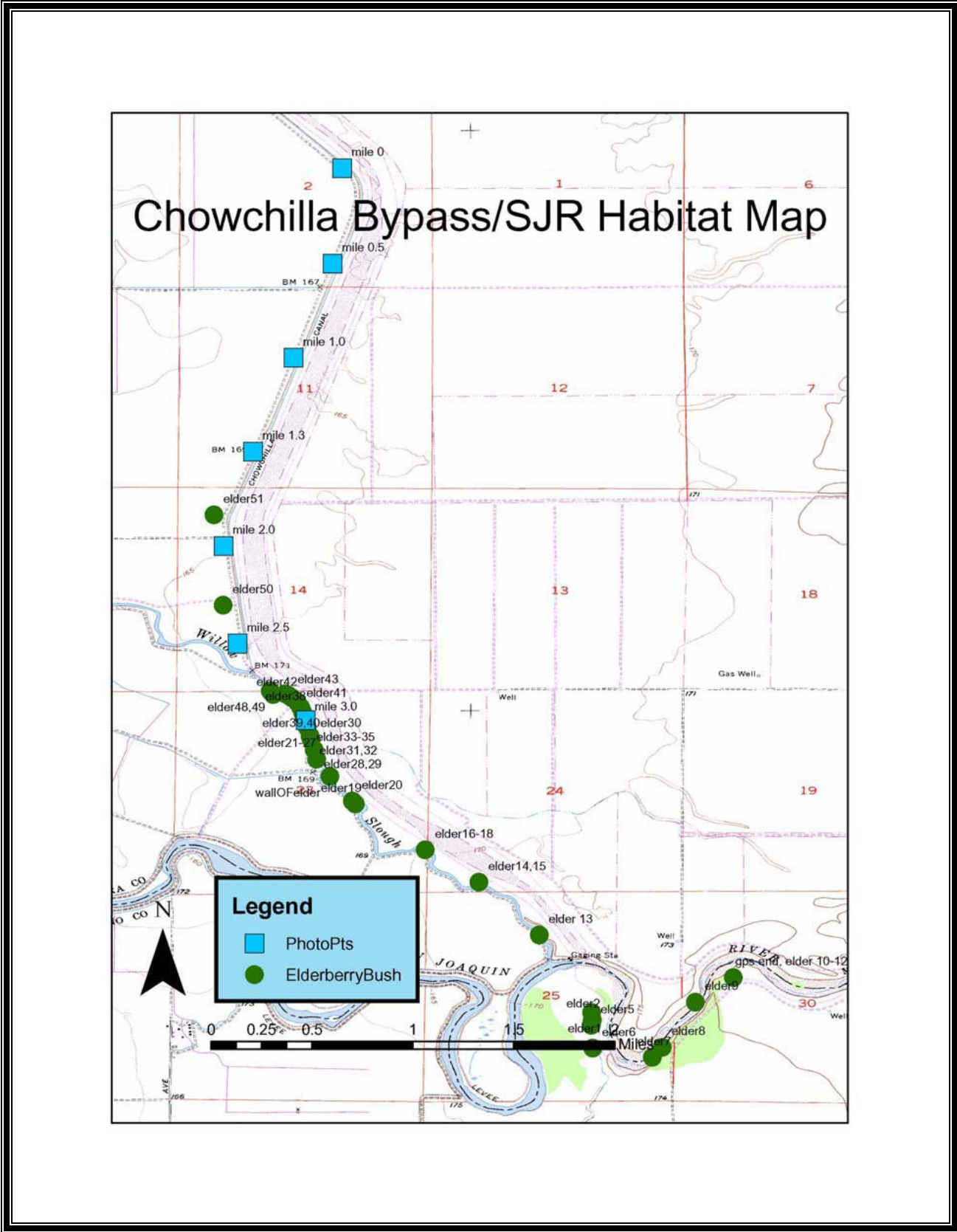


Plate 5. Location of Elderberry Shrubs